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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,933	08/21/2003	Kun-Ho Cho	1293.1958	7375

21171 7590 06/25/2004

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WASHINGTON, DC 20005

EXAMINER
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SEVER, ANDREW T

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,933

Applicant(s)

CHO ET AL. 

Examiner

Andrew T Sever

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☒ Claim(s) 1-13 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

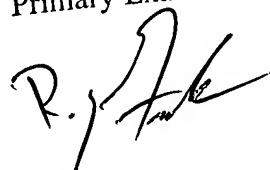
- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Rodney Fuller  
Primary Examiner



### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/15/2003.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: there are numerous errors.

Appropriate correction is required.

Numerous typographical and other errors were noted, for example on page 7 paragraph 31 applicant refers to lens 15 and 24 and then later lens 18 and 23, clearly one set or a combination is wrong.

### ***Claim Objections***

2. Claims 1-13 are objected to because of the following informalities: claim 1 claims in part “a color separation hologram to separate the incident into beams with different wavelengths;” it is not made clear what is made into beams with different wavelengths since incident is not followed by an appropriate word such as light. Appropriate correction is required.

Claims 2-13 are dependent on claim 1 and are object to due to their dependency on claim 1. For purposes of a prior art search and rejection of claims 1-13 it will be assumed that what is incident is a beam.

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3. Claim 23 is objected to because claim 23 recites the limitation "color separation hologram" in claim 22. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17-19 and 21-29 rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al. (US 5,969,832.)

Nakanishi teaches in figure 1 a projection system comprising a light source; a scrolling unit (4 or 5) to simultaneously scroll at least two incident light beams from the light source;

A light valve (7) forming a color image based on color separated scrolling light beams that is based at least on one of the two scrolled light beams; and

A projection unit (9) to project the color image.

*With regards to applicant's claims 18 and 19:*

The scrolling units are specified in column 9 lines 8-21 to be holograms for separating an incident beam into beams with different wavelengths.

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*With regards to applicant's claims 21- 23 see above.*

*With regards to applicant's claims 24-28:*

The method of using the system of Nakanishi to project is inherent in its existence.

*With regards to applicant's claim 29:*

The condenser lens (3) is used to control the width of the beam incident upon the scrolling unit.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 25 of copending

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Application No. 10,620,810 in view of Nakanishi et al. (US 5,9869,832) as applied to claims 17-19 and 21-29 above .

The '810 application teaches everything except a color separation hologram instead teach a spectroscope for separating the multi light incident. Nakanishi teaches using holograms in combination with a scrolling unit instead of dichroic arrays (which the '810 application specifies in paragraph 15 is what a spectroscope is) and teaches in column 12 lines 20-32 that this improves light utilization and resolution. Accordingly it would have been obvious to one of ordinary skill in the art to improve the '810 application by including holograms.

All other things are either taught by the '810 application alone or in combination with Nakanishi as outline in the above 35 USC 102 rejection based on Nakanishi.

This is a provisional obviousness-type double patenting rejection.

8. Claims 1-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/644,883 in view of Nakanishi et al. (US 5,9869,832) as applied to claims 17-19 and 21-29 above .

The '883 application teaches everything except a color separation hologram and a projection lens. Although the '883 application claims light emitting units emitting light beams of different wavelengths, one of ordinary skill in the art would recognize that this includes white light, which includes different wavelengths. Since the '883 application is silent on how to separate the light and Nakanishi teaches one well-known way of separating it; specifically Nakanishi teaches using holograms in combination with a scrolling unit instead of dichroic

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arrays and teaches in column 12 lines 20-32 that this improves light utilization and resolution.

Accordingly it would have been obvious to one of ordinary skill in the art to improve claim 1 of the '883 application by including holograms.

All other things are either taught by the '883 application alone or in combination with Nakanishi as outline in the above 35 USC 102 rejection based on Nakanishi.

This is a provisional obviousness-type double patenting rejection.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2003/0007134 to Maximus teaches in figure 6 a rotating polarization wheel

US 6,619,802 to Janssen et al. teaches in figure 1 a rotating drum with diffractive holographic patterns on it.

US 6,219,110 to Ishikawa et al. teaches in figure 1, 7, and 8 different moving optical units.

US 6,547,398 to Cho et al. teaches in figure 16 a scrolling lenticular array.

US 2004/0105077 to Kim et al.

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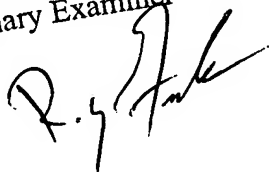
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 271-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

Rodney Fuller  
Primary Examiner

A handwritten signature in black ink, appearing to read 'R. Fuller', is written over the printed name and title of the Primary Examiner.